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      (FILE 'HOME' ENTERED AT 16:46:17 ON 23 MAR 2007)

      FILE 'REGISTRY' ENTERED AT 16:46:43 ON 23 MAR 2007
L1              STRUCTURE UPLOADED
L2           50 S L1
L3            0 S L1 FAM SAM
L4            1 S L1 FAM FULL

      FILE 'CAPLUS' ENTERED AT 16:47:41 ON 23 MAR 2007
L5           58 S L4
L6           21 S L4/THU
L7            1 S L5 AND NEOINTIMA
L8            3 S L5 AND ATHEROSCLEROSIS
L9           40 S L5 AND (PPAR OR (PEROXISOME(W)PROLIFERATOR-ACTIVATED(W)GAMMA)
L10          11 S L9 NOT PY>2004
L11         953 S (NEOINTIMA OR ATHEROSCLEROSIS) AND (PPAR OR (PEROXISOME(W)PRO
L12         377 S L11 NOT PY>2003
L13           0 S L12 AND LYSOPHOSPHATIDIC ACID
L14           0 S L12 AND (LYSOPHOSPHATIDIC ACID)

      FILE 'REGISTRY' ENTERED AT 16:53:36 ON 23 MAR 2007
              EXP LYSOPHOSPHATIDIC ACID/CN

      INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
      AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
      CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
      DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 16:54:08 ON 23 MAR 2007
              SEA (LYSOPHOSPHATIDIC(W)ACID)
              ---------
               8   FILE ADISINSIGHT
              97   FILE AGRICOLA
              18   FILE ANABSTR
              12   FILE AQUASCI
              64   FILE BIOENG
            2657   FILE BIOSIS
              86   FILE BIOTECHABS
              86   FILE BIOTECHDS
             790   FILE BIOTECHNO
             106   FILE CABA
            2440   FILE CAPLUS
                SEA (LYSOPHOSPHATIDIC(W)ACID) AND NEOINTIMA
                ---------
                7   FILE BIOSIS
                2   FILE BIOTECHNO
                7   FILE CAPLUS
                1   FILE DDFU
                4   FILE DGENE
                1   FILE DISSABS
                1   FILE DRUGU
                4   FILE EMBASE
                3   FILE ESBIOBASE
                1   FILE IFIPAT
                1   FILE LIFESCI
                4   FILE MEDLINE
                1   FILE PASCAL
                8   FILE SCISEARCH
                4   FILE TOXCENTER
                8   FILE USPATFULL
                1   FILE WPIDS
                1   FILE WPINDEX
L15              QUE (LYSOPHOSPHATIDIC(W) ACID) AND NEOINTIMA
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     FILE 'BIOSIS' ENTERED AT 16:55:31 ON 23 MAR 2007
L16             7 S (LYSOPHOSPHATIDIC(W)ACID) AND NEOINTIMA

     FILE 'CAPLUS, EMBASE' ENTERED AT 16:56:32 ON 23 MAR 2007
L17            11 S (LYSOPHOSPHATIDIC(W)ACID) AND NEOINTIMA
L18             8 DUP REM L17 (3 DUPLICATES REMOVED)

     FILE 'REGISTRY' ENTERED AT 17:00:48 ON 23 MAR 2007
                 EXP DIACYLGLYCEROL PHOSPHATE/CN
L19             0 S NEOINTIMA AND (PPAR(W)GAMMA(W)INHIBITOR)
L20             0 S NEOINTIMA AND (PPAR(2A)INHIBITOR)
L21             0 S NEOINTIMA AND ((PEROXISOME(W)PROLIFERATOR-ACTIVATED(W)RECEPTO

     FILE 'CAPLUS' ENTERED AT 17:08:36 ON 23 MAR 2007
L22             0 S NEOINTIMA AND ((PEROXISOME(W)PROLIFERATOR-ACTIVATED(W)RECEPTO
L23             0 S NEOINTIMA AND (PPAR(2A)INHIBITOR)
L24           917 S PPAR(2A)(INHIBI? OR ANTAGONIST)
L25             9 S L24 AND NEOINTIMA
L26            18 S PPAR(2A)(ANALOG)
L27             0 S L26 AND NEOINTIMA
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PASSWORD:
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SESSION RESUMED IN FILE 'REGISTRY' AT 17:06:56 ON 23 MAR 2007
FILE 'REGISTRY' ENTERED AT 17:06:56 ON 23 MAR 2007
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COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
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FULL ESTIMATED COST                                       0.45     195.86

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                       0.00     -11.70

=> s neointima and (PPAR(w)gamma(w)inhibitor)
             0 NEOINTIMA
           214 PPAR
        173909 GAMMA
         15061 INHIBITOR
             0 PPAR(W)GAMMA(W)INHIBITOR
L19          0 NEOINTIMA AND (PPAR(W)GAMMA(W)INHIBITOR)

=> s neointima and (PPAR(2a)inhibitor)
             0 NEOINTIMA
           214 PPAR
         15061 INHIBITOR
             0 PPAR(2A)INHIBITOR
L20          0 NEOINTIMA AND (PPAR(2A)INHIBITOR)

=> s neointima and ((Peroxisome(w)proliferator-activated(w)receptor)(2a)inhibitor)
             0 NEOINTIMA
           828 PEROXISOME
           504 PROLIFERATOR
          5524 ACTIVATED
           474 PROLIFERATOR-ACTIVATED
                 (PROLIFERATOR(W)ACTIVATED)
        111478 RECEPTOR
         15061 INHIBITOR
             0 (PEROXISOME(W)PROLIFERATOR-ACTIVATED(W)RECEPTOR)(2A)INHIBITOR
L21          0 NEOINTIMA AND ((PEROXISOME(W)PROLIFERATOR-ACTIVATED(W)RECEPTOR)(
               2A)INHIBITOR)

=> file caplus
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      66.15     261.56

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                       0.00     -11.70

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FILE LAST UPDATED: 22 Mar 2007 (20070322/ED)

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=> s neointima and ((Peroxisome(w)proliferator-activated(w)receptor)(2a)inhibitor)
          1779 NEOINTIMA
         17707 PEROXISOME
         11527 PROLIFERATOR
        518979 ACTIVATED
         10513 PROLIFERATOR-ACTIVATED
                 (PROLIFERATOR(W)ACTIVATED)
        692286 RECEPTOR
        534559 INHIBITOR
            19 (PEROXISOME(W)PROLIFERATOR-ACTIVATED(W)RECEPTOR)(2A)INHIBITOR
L22          0 NEOINTIMA AND ((PEROXISOME(W)PROLIFERATOR-ACTIVATED(W)RECEPTOR)(
              2A)INHIBITOR)

=> s neointima and (PPAR(2a)inhibitor)
          1779 NEOINTIMA
          8826 PPAR
        534559 INHIBITOR
           125 PPAR(2A)INHIBITOR
L23          0 NEOINTIMA AND (PPAR(2A)INHIBITOR)

=> log hold
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                18.56     280.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                 0.00     -11.70

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STN INTERNATIONAL SESSION SUSPENDED AT 17:09:01 ON 23 MAR 2007

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LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 17:16:37 ON 23 MAR 2007
FILE 'CAPLUS' ENTERED AT 17:16:37 ON 23 MAR 2007
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COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                18.56     280.12

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
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                                                          ENTRY    SESSION
CA SUBSCRIBER PRICE                                        0.00     -11.70

=> s PPAR(2a)(inhibi? or antagonist)
          8826 PPAR
       1915167 INHIBI?
        167726 ANTAGONIST
L24        917 PPAR(2A)(INHIBI? OR ANTAGONIST)

=> s l24 and neointima
          1779 NEOINTIMA
L25          9 L24 AND NEOINTIMA

=> d l25 1-9 ti

L25  ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Activation of Peroxisome Proliferator-Activated Receptor γ
     Suppresses Telomerase Activity in Vascular Smooth Muscle Cells

L25  ANSWER 2 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Activation of Peroxisome Proliferator-Activated Receptor γ
     Suppresses Telomerase Activity in Vascular Smooth Muscle Cells

L25  ANSWER 3 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   PPARγ gene transfer sustains apoptosis, inhibits vascular smooth
     muscle cell proliferation, and reduces neointima formation after
     balloon injury in rats

L25  ANSWER 4 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   New targets for PPARγ in the vessel wall: implications for
     restenosis

L25  ANSWER 5 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Lysophosphatidic acid analogs and inhibition of neointima
     formation

L25  ANSWER 6 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Thrombogenic and atherogenic activities of lysophosphatidic acid

L25  ANSWER 7 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Lysophosphatidic acid induces neointima formation through
     PPARγ activation

L25  ANSWER 8 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Peroxisome proliferator-activated receptor γ inhibits transforming
     growth factor β-induced connective tissue growth factor expression in
     human aortic smooth muscle cells by interfering with Smad3

L25  ANSWER 9 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Control of vascular cell proliferation and migration by PPAR-γ: A
     new approach to the macrovascular complications of diabetes


=> s PPAR(2a)(analog)
          8826 PPAR
        219805 ANALOG
L26         18 PPAR(2A)(ANALOG)

=> s l26 and neointima
          1779 NEOINTIMA
L27          0 L26 AND NEOINTIMA

=> d l25 1 2 3 4 5 6 7 8 9 ti abs bib
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L25 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Activation of Peroxisome Proliferator-Activated Receptor γ Suppresses Telomerase Activity in Vascular Smooth Muscle Cells
AB Activation of the peroxisome proliferator-activated receptor γ (PPARγ), the mol. target for insulin sensitizing thiazolidinediones used in patients with type 2 diabetes, inhibits vascular smooth muscle cell (VSMC) proliferation and prevents atherosclerosis and neointima formation. Emerging evidence indicates that telomerase controls key cellular functions including replicative lifespan, differentiation, and cell proliferation. In the present study, the authors demonstrate that ligand-induced and constitutive PPAR γ activation inhibits telomerase activity in VSMCs. Telomerase reverse transcriptase (TERT) confers the catalytic activity of telomerase, and PPAR.gamma. ligands inhibit TERT expression through a receptor-dependent suppression of the TERT promoter. 5'-Deletion anal., site-directed mutagenesis, and transactivation studies using overexpression of Ets-1 revealed that suppression of TERT transcription by PPARγ is mediated through neg. cross-talk with Ets-1-dependent transactivation of the TERT promoter. Chromatin immunopptn. assays further demonstrated that PPAR.gamma. ligands inhibit Ets-1 binding to the TERT promoter, which is mediated at least in part through an inhibition of Ets-1 expression by PPARγ ligands. In VSMCs overexpressing TERT, the efficacy of PPARγ ligands to inhibit cell proliferation is lost, indicating that TERT constitutes an important mol. target for the antiproliferative effects of PPARγ ligands. Finally, the authors demonstrate that telomerase activation during the proliferative response after vascular injury is effectively inhibited by PPAR.gamma. ligands. These findings provide a previously unrecognized mechanism for the antiproliferative effects of PPARγ ligands and support the concept that PPARγ ligands may constitute a novel therapeutic approach for the treatment of proliferative cardiovascular diseases.
AN 2006:324631 CAPLUS <<LOGINID::20070323>>
DN 144:445634
TI Activation of Peroxisome Proliferator-Activated Receptor γ Suppresses Telomerase Activity in Vascular Smooth Muscle Cells
AU Ogawa, Daisuke; Nomiyama, Takashi; Nakamachi, Takafumi; Heywood, Elizabeth B.; Stone, Jeffrey F.; Berger, Joel P.; Law, Ronald E.; Bruemmer, Dennis
CS USA
SO Circulation Research (2006), 98(7), 977
CODEN: CIRUAL; ISSN: 0009-7330
PB Lippincott Williams & Wilkins
DT Journal
LA English

L25 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Activation of Peroxisome Proliferator-Activated Receptor γ Suppresses Telomerase Activity in Vascular Smooth Muscle Cells
AB Activation of the peroxisome proliferator-activated receptor (PPAR) γ, the mol. target for insulin sensitizing thiazolidinediones used in patients with type 2 diabetes, inhibits vascular smooth muscle cell (VSMC) proliferation and prevents atherosclerosis and neointima formation. Emerging evidence indicates that telomerase controls key cellular functions including replicative lifespan, differentiation, and cell proliferation. In the present study, we demonstrate that ligand-induced and constitutive PPAR.gamma. activation inhibits telomerase activity in VSMCs. Telomerase reverse transcriptase (TERT) confers the catalytic activity of telomerase, and PPAR.gamma. ligands inhibit TERT expression through a receptor-dependent suppression of the TERT promoter. 5'-deletion anal., site-directed mutagenesis, and transactivation studies using overexpression of Ets-1 revealed that suppression of TERT transcription by PPARγ is mediated through neg. cross-talk with Ets-1-dependent transactivation of the TERT promoter. Chromatin immunopptn. assays

further demonstrated that PPAR.gamma. ligands inhibit Ets-1 binding to the TERT promoter, which is mediated at least in part through an inhibition of Ets-1 expression by PPARγ ligands. In VSMCs overexpressing TERT, the efficacy of PPARγ ligands to inhibit cell proliferation is lost, indicating that TERT constitutes an important mol. target for the antiproliferative effects of PPARγ ligands. Finally, we demonstrate that telomerase activation during the proliferative response after vascular injury is effectively inhibited by PPAR.gamma. ligands. These findings provide a previously unrecognized mechanism for the antiproliferative effects of PPARγ ligands and support the concept that PPARγ ligands may constitute a novel therapeutic approach for the treatment of proliferative cardiovascular diseases.

AN 2006:324629 CAPLUS <<LOGINID::20070323>>
DN 144:445308
TI Activation of Peroxisome Proliferator-Activated Receptor γ Suppresses Telomerase Activity in Vascular Smooth Muscle Cells
AU Ogawa, Daisuke; Nomiyama, Takashi; Nakamachi, Takafumi; Heywood, Elizabeth B.; Stone, Jeffrey F.; Berger, Joel P.; Law, Ronald E.; Bruemmer, Dennis
CS Division of Endocrinology and Molecular Medicine, University of Kentucky College of Medicine, Lexington, KY, 40536-0200, USA
SO Circulation Research (2006), 98(7), e50-e59
CODEN: CIRUAL; ISSN: 0009-7330
PB Lippincott Williams & Wilkins
DT Journal
LA English
RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI PPARγ gene transfer sustains apoptosis, inhibits vascular smooth muscle cell proliferation, and reduces neointima formation after balloon injury in rats
AB Objective- There is still debate as to whether antiatherosclerotic effect of PPARγ ligands is dependent on PPARγ gene itself or some other pathway. Methods and Results- To investigate the effect of PPARγ gene modulation on neointima formation after balloon injury, we delivered adenoviral vectors expressing the wild-type (WT) dominant neg. (DN) PPARγ, or a control gene (β-galactosidase [BG]) into carotid artery after balloon injury in rosiglitazone (a PPARγ ligand)-treated (R+) (3 mg/kg/d) and nontreated (R-) rats. Two weeks after gene delivery, in both R+ and R- animals, the PPARγ-WT gene transfer showed a significantly lower intima-media ratio (IMR) than control group. Moreover, the delivery of a PPARγ-DN form showed the highest IMR (in R+WT, 0.51±0.15; R+BG, 0.89±0.14; R+DN, 1.20±0.18, $P<0.05$ and in R-WT, 0.91±0.21; R-BG, 1.44±0.23; R-DN, 1.74±0.29, $P<0.05$). Proliferation and migration showed same result pattern as IMR. In addition, apoptotic indexes were significantly higher in the PPARγ-WT gene transferred group than in the PPARγ-DN group. Conclusions- In vivo transfer of the PPARγ-WT gene was found to inhibit smooth muscle proliferation, sustain apoptosis, and reduce neointima formation after balloon injury irresp. of rosiglitazone treatment. These results indicate that PPARγ overexpression itself has a protective role against restenosis after balloon injury.
AN 2006:236551 CAPLUS <<LOGINID::20070323>>
DN 144:381676
TI PPARγ gene transfer sustains apoptosis, inhibits vascular smooth muscle cell proliferation, and reduces neointima formation after balloon injury in rats
AU Lim, Soo; Jin, Cheng Ji; Kim, Min; Chung, Sung Soo; Park, Ho Seon; Lee, In Kyu; Lee, Choon Taek; Cho, Young Min; Lee, Hong Kyu; Park, Kyong Soo
CS Department of Internal Medicine, Seoul National University College of Medicine, S. Korea

SO Arteriosclerosis, Thrombosis, and Vascular Biology (2006), 26(4), 808-813
CODEN: ATVBFA; ISSN: 1079-5642
PB Lippincott Williams & Wilkins
DT Journal
LA English
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI New targets for PPARγ in the vessel wall: implications for restenosis
AB A review. Peroxisome proliferator-activated receptor {gamma} (PPARγ), the nuclear receptor that binds the insulin-sensitizing thiazolidinediones (TZDs), is prominently upregulated in intimal vascular smooth muscle cells (VSMC) after mech. injury to the vessel wall. Several TZD PPARγ ligands have been shown to inhibit neointima formation in both normal and insulin-resistant vasculature. The suppression of intimal hyperplasia by TZD PPARγ ligands probably results from their activity to inhibit VSMC growth and promote apoptosis. TZDs prevent VSMC proliferation by blocking the activity of regulatory proteins, such as phosphorylation of the retinoblastoma protein (Rb). Rb functions as a G1 gatekeeper by controlling S phase gene expression mediated by the E2F transcription factor. Consistent with their effect on Rb phosphorylation, PPAR.gamma. ligands inhibit the mitogenic induction of minichromosome maintenance (MCM) proteins 6 and 7, two E2F-regulated S phase genes essential for DNA replication. PPARγ ligands also induced apoptosis in VSMC, which correlated with a potent induction of GADD45, a gene implicated in controlling cell growth and survival. A constitutively active form of PPARγ targeted the same cell cycle regulators as did PPARγ ligands, consistent with a nuclear-receptor-dependent mechanism of action. This review will summarize mechanisms through which PPARγ modulates VSMC proliferation and apoptosis suggesting that PPARγ itself is a novel important regulator of cell cycle and apoptosis and may provide a new therapeutic approach to prevent restenosis.
AN 2005:127557 CAPLUS <<LOGINID::20070323>>
DN 142:441040
TI New targets for PPARγ in the vessel wall: implications for restenosis
AU Bruemmer, D.; Blaschke, F.; Law, R. E.
CS Division of Endocrinology and Molecular Medicine, University of Kentucky College of Medicine, Lexington, KY, USA
SO International Journal of Obesity (2005), 29(Suppl. 1), S26-S30
CODEN: IJOBDP; ISSN: 0307-0565
PB Nature Publishing Group
DT Journal; General Review
LA English
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic acid analogs and inhibition of neointima formation
AB The phospholipid growth factor lysophosphatidic acids (LPAs) containing unsatd. fatty acids (18:1, 18:2 and 20:4) and fatty alcs. containing hydrocarbon chains with more than 4 carbons were capable of inducing a rapid formation of neointima, an initial step in the development of atherosclerotic plaque. LPAs with saturated fatty acids did not induce neointima formation. A Peroxisome Proliferator-Activated Receptors gamma (PPARγ)-specific agonist Rosiglitasone also induced a profound formation of neointima. GW9662, a selective and irreversible antagonist of PPAR.gamma., abolished LPA- and Rosiglitazone-induced neointima formation, indicating that LPA-induced neointima formation requires the activation of

PPARγ. These data suggest that LPA analogs that bind to but do not activate downstream signaling of PPARγ or antagonists of PPAR.gamma. that inhibit PPAR.gamma. signaling would be useful in the prevention and/or treatment of neointima formation and atherosclerosis.

AN 2004:857161 CAPLUS <<LOGINID::20070323>>
DN 141:343506
TI Lysophosphatidic acid analogs and inhibition of neointima formation
IN Tigyi, Gabor; Baker, Daniel L.; Zhang, Chunxiang
PA USA
SO U.S. Pat. Appl. Publ., 23 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004204383	A1	20041014	US 2004-821739	20040409
	AU 2004229467	A1	20041028	AU 2004-229467	20040409
	CA 2521189	A1	20041028	CA 2004-2521189	20040409
	WO 2004091496	A2	20041028	WO 2004-US11016	20040409
	WO 2004091496	A3	20050324		
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	EP 1613298	A2	20060111	EP 2004-759365	20040409
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
PRAI	US 2003-462274P	P	20030411		
	WO 2004-US11016	W	20040409		

L25 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Thrombogenic and atherogenic activities of lysophosphatidic acid
AB A review. Lysophosphatidic acid (LPA) has been identified as a biol. active lipid in mildly-oxidized LDL, human atherosclerotic lesions, and the supernatant of activated platelets. The evidence that LPA has thrombogenic and atherogenic activities has increased substantially in recent years. Supporting the thrombogenic activity of LPA, anal. of the core region of human carotid plaques revealed recently the presence of alkyl- and acyl-mol. species from LPA with high platelet-activating potency (16:0 alkyl-LPA, 20:4 acyl-LPA). LPA, lipid exts. of atherosclerotic plaques, and the lipid-rich core elicited shape change and, in synergy with other platelet stimuli, aggregation of isolated platelets. This effect was completely abrogated by prior incubation of platelets with LPA receptor antagonists. Furthermore, LPA at concns. approaching those found in vivo, induced platelet shape change, aggregation, and platelet-monocyte aggregate formation in blood. LPA-stimulated platelet aggregation was mediated by the ADP-stimulated activation of the P2Y1 and P2Y12 receptors. Supporting its atherogenic activity, LPA is a mitogen and motogen to vascular smooth muscle cells (VSMCs) and an activator of endothelial cells and macrophages. Recently, LPA has been identified as an agonist of the peroxisome proliferator activating receptor γ(PPARγ), which is a key regulator of atherogenesis. LPA elicits progressive neointima formation, which is fully abolished by GW9662, an antagonist of

PPAR.gamma.. We propose that LPA plays a central role in eliciting vascular remodeling and atherogenesis. Furthermore, upon rupture of lipid-rich atherosclerotic plaques, LPA may trigger platelet aggregation and intra-arterial thrombus formation. Antagonists of LPA receptors might be useful in preventing LPA-elicited thrombus formation and neointima formation in patients with cardiovascular diseases.

AN 2004:654161 CAPLUS <<LOGINID::20070323>>
DN 141:171305
TI Thrombogenic and atherogenic activities of lysophosphatidic acid
AU Siess, Wolfgang; Tigyi, Gabor
CS Institute for Prevention of Cardiovascular Diseases, University of Munich, Germany
SO Journal of Cellular Biochemistry (2004), 92(6), 1086-1094
CODEN: JCEBD5; ISSN: 0730-2312
PB Wiley-Liss, Inc.
DT Journal; General Review
LA English
RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic acid induces neointima formation through PPARγ activation
AB Neointimal lesions are characterized by accumulation of cells within the arterial wall and are a prelude to atherosclerotic disease. Here the authors report that a brief exposure to either alkyl ether analogs of the growth factor-like phospholipid lysophosphatidic acid (LPA), products generated during the oxidative modification of low d. lipoprotein, or to unsatd. acyl forms of LPA induce progressive formation of neointima in vivo in a rat carotid artery model. This effect is completely inhibited by the peroxisome proliferator-activated receptor (PPAR)γ antagonist GW9662 and mimicked by PPARγ agonists Rosiglitazone and 1-O-hexadecyl-2-azeleoylphosphatidylcholine. In contrast, stearoyloxovalerylphosphatidylcholine, a PPARα agonist and the polypeptides epidermal growth factor, platelet-derived growth factor, and vascular endothelial growth factor failed to elicit neointima. The structure-activity relation for neointima induction by LPA analogs in vivo is identical to that of PPARγ activation in vitro and disparate from that of LPA G protein-coupled receptor activation. Neointima -inducing LPA analogs up-regulated the CD36 scavenger receptor in vitro and in vivo and elicited dedifferentiation of cultured vascular smooth muscle cells that was prevented by GW9662. These results suggest that selected LPA analogs are important novel endogenous PPARγ ligands capable of mediating vascular remodeling and that activation of the nuclear transcription factor PPARγ is both necessary and sufficient for neointima formation by components of oxidized low d. lipoprotein.
AN 2004:242383 CAPLUS <<LOGINID::20070323>>
DN 140:373126
TI Lysophosphatidic acid induces neointima formation through PPARγ activation
AU Zhang, Chunxiang; Baker, Daniel L.; Yasuda, Satoshi; Makarova, Natalia; Balazs, Louisa; Johnson, Leonard R.; Marathe, Gopal K.; McIntyre, Thomas M.; Xu, Yong; Prestwich, Glenn D.; Byun, Hoe-Sup; Bittman, Robert; Tigyi, Gabor
CS Vascular Biology Center of Excellence, The University of Tennessee Health Science Center, Memphis, TN, 38163, USA
SO Journal of Experimental Medicine (2004), 199(6), 763-774
CODEN: JEMEAV; ISSN: 0022-1007
PB Rockefeller University Press
DT Journal
LA English

RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Peroxisome proliferator-activated receptor γ inhibits transforming growth factor β-induced connective tissue growth factor expression in human aortic smooth muscle cells by interfering with Smad3
AB Activation of peroxisome proliferator-activated receptor γ (PPARγ) after balloon injury significantly inhibits VSMC proliferation and neointima formation. However, the precise mechanisms of this inhibition have not been determined The authors hypothesized that activation of PPARγ in vascular injury could attenuate VSMC growth and matrix production during vascular lesion formation. Since connective tissue growth factor (CTGF) is a key factor regulating extracellular matrix production, abrogation of transforming growth factor β (TGF-β)-induced CTGF production by PPARγ activation may be one of the mechanisms through which PPAR.gamma. agonists inhibit neointima formation after vascular injury. In this study, the authors demonstrate that the PPARγ natural ligand (15-deoxyprostaglandin J2) and a synthetic ligand (GW7845) significantly inhibit TGF-β-induced CTGF production in a dose-dependent manner in HASMCs. In addition, suppression of CTGF mRNA expression is relieved by pretreatment with an antagonist of PPAR.gamma. (GW9662), suggesting that the inhibition of CTGF expression is mediated by PPARγ. To elucidate further the mol. mechanism by which PPAR.gamma. inhibits CTGF expression, an .apprx.2-kilobase pair CTGF promoter was cloned. The authors found that PPAR.gamma. activation inhibits TGF-β-induced CTGF promoter activity in a dose-dependent manner, and suppression of CTGF promoter activity by PPARγ activation is completely rescued by overexpression of Smad3, but not by Smad4. Furthermore, PPARγ phys. interacts with Smad3 but not Smad4 in vitro in glutathione S-transferase pull-down expts. Taken together, the data suggest that PPAR γ inhibits TGF-β-induced CTGF expression in HASMCs by directly interfering with the Smad3 signaling pathway.
AN 2001:908512 CAPLUS <<LOGINID::20070323>>
DN 136:198017
TI Peroxisome proliferator-activated receptor γ inhibits transforming growth factor β-induced connective tissue growth factor expression in human aortic smooth muscle cells by interfering with Smad3
AU Fu, Mingui; Zhang, Jifeng; Zhu, Xiaojun; Myles, David E.; Willson, Timothy M.; Liu, Xuedong; Chen, Yuqing E.
CS Cardiovascular Research Institute, Morehouse School of Medicine, Atlanta, GA, 30310, USA
SO Journal of Biological Chemistry (2001), 276(49), 45888-45894
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Control of vascular cell proliferation and migration by PPAR-γ: A new approach to the macrovascular complications of diabetes
AB A review with 82 refs. Compared with nondiabetic subjects, type 2 diabetic individuals are at an increased risk for coronary artery disease and coronary restenosis after angioplasty or stenting. Increased proliferation and migration of vascular smooth muscle cells (VSMCs) contribute importantly to the formation of both atherosclerotic and restenotic lesions. Therefore, pharmaceutical interventions targeting proteins that regulate VSMC growth or movement are a promising new approach to treat diabetes-associated cardiovascular disease. Peroxisome proliferator-activated receptor-γ (PPAR-γ) is a member of the

nuclear receptor superfamily that, when activated by thiazolidinedione (TZD) insulin sensitizers, regulates a host of target genes. All of the major cells in the vasculature express PPAR-γ, including endothelial cells, VSMCs, and monocytes/macrophages. PPAR-γ is present in intimal macrophages and VSMCs in early human atheromas. In an animal model of vascular injury, PPAR-γ levels are substantially elevated in the neointima that forms after mech. injury of the endothelium. Recent exptl. studies provide evidence that PPAR-γ may function to protect the vasculature from injury. Cell culture studies have shown that TZD PPAR-γ ligands inhibit both the proliferation and migration of VSMCs. These antiatherogenic activities of PPAR-γ may also occur in vivo, because TZDs inhibit lesion formation in several animal models. PPAR-γ ligands may also protect the vasculature indirectly by normalizing metabolic abnormalities of the diabetic milieu that increase cardiovascular risk. Activation of PPAR-γ, newly defined in vascular cells, may be a useful approach to protect the vasculature in diabetes.

AN 2001:136312 CAPLUS <<LOGINID::20070323>>
DN 134:235155
TI Control of vascular cell proliferation and migration by PPAR-γ: A new approach to the macrovascular complications of diabetes
AU Hsueh, Willa A.; Jackson, Simon; Law, Ronald E.
CS Department of Medicine, the Endocrinology, Diabetes, and Hypertension Division, University of California School of Medicine, Los Angeles, CA, 90095-7073, USA
SO Diabetes Care (2001), 24(2), 392-397
CODEN: DICAD2; ISSN: 0149-5992
PB American Diabetes Association, Inc.
DT Journal; General Review
LA English
RE.CNT 82 THERE ARE 82 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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NEWS 4	DEC 18	CA/CAplus patent kind codes updated
NEWS 5	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS 6	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS 7	DEC 27	CA/CAplus enhanced with more pre-1907 records
NEWS 8	JAN 08	CHEMLIST enhanced with New Zealand Inventory of Chemicals
NEWS 9	JAN 16	CA/CAplus Company Name Thesaurus enhanced and reloaded
NEWS 10	JAN 16	IPC version 2007.01 thesaurus available on STN
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NEWS 12	JAN 22	CA/CAplus updated with revised CAS roles
NEWS 13	JAN 22	CA/CAplus enhanced with patent applications from India
NEWS 14	JAN 29	PHAR reloaded with new search and display fields
NEWS 15	JAN 29	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 16	FEB 15	PATDPASPC enhanced with Drug Approval numbers
NEWS 17	FEB 15	RUSSIAPAT enhanced with pre-1994 records
NEWS 18	FEB 23	KOREAPAT enhanced with IPC 8 features and functionality
NEWS 19	FEB 26	MEDLINE reloaded with enhancements
NEWS 20	FEB 26	EMBASE enhanced with Clinical Trial Number field
NEWS 21	FEB 26	TOXCENTER enhanced with reloaded MEDLINE
NEWS 22	FEB 26	IFICDB/IFIPAT/IFIUDB reloaded with enhancements
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NEWS 24	MAR 15	WPIDS/WPIX enhanced with new FRAGHITSTR display format
NEWS 25	MAR 16	CASREACT coverage extended
NEWS 26	MAR 20	MARPAT now updated daily
NEWS 27	MAR 22	LWPI reloaded
NEWS 28	MAR 30	RDISCLOSURE reloaded with enhancements
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NEWS 30	APR 02	JICST-EPLUS removed from database clusters and STN

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=> index bioscience
FILE 'DRUGMONOG' ACCESS NOT AUTHORIZED
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                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

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       AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
       CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
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=> s (lysophosphatidic(w)acid)and(atherosclerosis or neointima)and antagonist
          7   FILE BIOSIS
         10   FILE CAPLUS
          1   FILE DDFU
          6   FILE DGENE
  23 FILES SEARCHED...
          1   FILE DRUGU
         10   FILE EMBASE
          3   FILE ESBIOBASE
          1   FILE IFIPAT
          1   FILE LIFESCI
          4   FILE MEDLINE
  44 FILES SEARCHED...
          5   FILE PROUSDDR
          7   FILE SCISEARCH
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         45   FILE USPAT2
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  66 FILES SEARCHED...
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L1    QUE (LYSOPHOSPHATIDIC(W) ACID) AND(ATHEROSCLEROSIS OR NEOINTIMA) AND ANTAG
      ONIST

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COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
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=> s (lysophosphatidic(w)acid)and(atherosclerosis or neointima)and antagonist
L2          20 (LYSOPHOSPHATIDIC(W) ACID) AND(ATHEROSCLEROSIS OR NEOINTIMA)
               AND ANTAGONIST

=> dup rem l2
PROCESSING COMPLETED FOR L2
L3           16 DUP REM L2 (4 DUPLICATES REMOVED)

=> d l3 1-16 ti

L3   ANSWER 1 OF 16  EMBASE  COPYRIGHT (c) 2007 Elsevier B.V. All rights
     reserved on STN                                        DUPLICATE 1
TI   Pitavastatin inhibits lysophosphatidic acid-induced
     proliferation and monocyte chemoattractant protein-1 expression in aortic
     smooth muscle cells by suppressing Rac-1-mediated reactive oxygen species
     generation.

L3   ANSWER 2 OF 16  EMBASE  COPYRIGHT (c) 2007 Elsevier B.V. All rights
     reserved on STN                                        DUPLICATE 2
TI   Lysophospholipids increase IL-8 and MCP-1 expressions in human umbilical
     cord vein endothelial cells through an IL-1 -dependent mechanism.

L3   ANSWER 3 OF 16  EMBASE  COPYRIGHT (c) 2007 Elsevier B.V. All rights
     reserved on STN
TI   Adhesion of human platelets to albumin is synergistically increased by
     lysophosphatidic acid and adrenaline in a
     donor-dependent fashion.

L3   ANSWER 4 OF 16  EMBASE  COPYRIGHT (c) 2007 Elsevier B.V. All rights
     reserved on STN
TI   Lysophospholipid receptors as potential drug targets in tissue
     transplantation and autoimmune diseases.

L3   ANSWER 5 OF 16  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   High-throughput Screening for LPA3 Antagonist Selectivity

L3   ANSWER 6 OF 16  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   3-D Database Searching for the Identification of Novel LPA1 Antagonists

L3   ANSWER 7 OF 16  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Lysophosphatidic acid analogs and inhibition of
     neointima formation

L3   ANSWER 8 OF 16  EMBASE  COPYRIGHT (c) 2007 Elsevier B.V. All rights
     reserved on STN                                        DUPLICATE 3
TI   Thrombogenic and atherogenic activities of lysophosphatidic
     acid.

L3   ANSWER 9 OF 16  EMBASE  COPYRIGHT (c) 2007 Elsevier B.V. All rights
     reserved on STN                                        DUPLICATE 4
TI   Lysophosphatidic Acid Induces Neointima
     Formation Through PPARγ Activation.

L3   ANSWER 10 OF 16  EMBASE  COPYRIGHT (c) 2007 Elsevier B.V. All rights
     reserved on STN
TI   Techniques: Cardiovascular pharmacology and drug discovery in the 21st
     century.

L3   ANSWER 11 OF 16  EMBASE  COPYRIGHT (c) 2007 Elsevier B.V. All rights
     reserved on STN
TI   Potential role of lysophosphatidic acid in
     hypertension and atherosclerosis.
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L3 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
TI Subtype-Selective Antagonists of Lysophosphatidic Acid Receptors Inhibit Platelet Activation Triggered by the Lipid Core of Atherosclerotic Plaques

L3 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
TI Activation of human monocytic cells by lysophosphatidic acid and sphingosine-1-phosphate

L3 ANSWER 14 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Rac regulates cardiovascular superoxide through diverse molecular interactions: More than a binary GTP switch.

L3 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidylcholine stimulates phospholipase D activity in mouse peritoneal macrophages

L3 ANSWER 16 OF 16 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI The significance of platelet-derived growth factors for proliferation of vascular smooth muscle cells.

=> s l3 not py>2004
L4 9 L3 NOT PY>2004

=> d l4 1-9 ti

L4 ANSWER 1 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Thrombogenic and atherogenic activities of lysophosphatidic acid.

L4 ANSWER 2 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Techniques: Cardiovascular pharmacology and drug discovery in the 21st century.

L4 ANSWER 3 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Lysophosphatidic Acid Induces Neointima Formation Through PPARγ Activation.

L4 ANSWER 4 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Potential role of lysophosphatidic acid in hypertension and atherosclerosis.

L4 ANSWER 5 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Rac regulates cardiovascular superoxide through diverse molecular interactions: More than a binary GTP switch.

L4 ANSWER 6 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI The significance of platelet-derived growth factors for proliferation of vascular smooth muscle cells.

L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Subtype-Selective Antagonists of Lysophosphatidic Acid Receptors Inhibit Platelet Activation Triggered by the Lipid Core of Atherosclerotic Plaques

L4 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Activation of human monocytic cells by lysophosphatidic acid and sphingosine-1-phosphate

L4 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidylcholine stimulates phospholipase D activity in mouse peritoneal macrophages

=> d l4 1 2 3 4 6 7 8 9 ti abs bib

L4 ANSWER 1 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Thrombogenic and atherogenic activities of lysophosphatidic acid.
AB Lysophosphatidic acid (LPA) has been identified as a biologically active lipid in mildly-oxidized LDL, human atherosclerotic lesions, and the supernatant of activated platelets. The evidence that LPA has thrombogenic and atherogenic activities has increased substantially in recent years. Supporting the thrombogenic activity of LPA, analysis of the core region of human carotid plaques revealed recently the presence of alkyl- and acyl-molecular species from LPA with high platelet-activating potency (16:0 alkyl-LPA, 20:4 acyl-LPA). LPA, lipid extracts of atherosclerotic plaques, and the lipid-rich core elicited shape change and, in synergy with other platelet stimuli, aggregation of isolated platelets. This effect was completely abrogated by prior incubation of platelets with LPA receptor antagonists. Furthermore, LPA at concentrations approaching those found in vivo, induced platelet shape change, aggregation, and platelet-monocyte aggregate formation in blood. LPA-stimulated platelet aggregation was mediated by the ADP-stimulated activation of the P2Y(1) and P2Y(12) receptors. Supporting its atherogenic activity, LPA is a mitogen and motogen to vascular smooth muscle cells (VSMCs) and an activator of endothelial cells and macrophages. Recently, LPA has been identified as an agonist of the peroxisome proliferator activating receptor γ (PPARγ), which is a key regulator of atherogenesis. LPA elicits progressive neointima formation, which is fully abolished by GW9662, an antagonist of PPARγ. We propose that LPA plays a central role in eliciting vascular remodeling and atherogenesis. Furthermore, upon rupture of lipid-rich atherosclerotic plaques, LPA may trigger platelet aggregation and intra-arterial thrombus formation. Antagonists of LPA receptors might be useful in preventing LPA-elicited thrombus formation and neointima formation in patients with cardiovascular diseases. .COPYRGT. 2004 Wiley-Liss, Inc.
AN 2006402271 EMBASE <<LOGINID::20070405>>
TI Thrombogenic and atherogenic activities of lysophosphatidic acid.
AU Siess W.; Tigyi G.
CS G. Tigyi, University of Tennessee Health Science Center, Department of Physiology, 894 Union Ave., Memphis, TN 38163, United States. gtigyi@physio1.utmem.edu
SO Journal of Cellular Biochemistry, (2004) Vol. 92, No. 6, pp. 1086-1094.
Refs: 46
ISSN: 0730-2312 E-ISSN: 1097-4644 CODEN: JCEBD5
CY United States
DT Journal; Article
FS 018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry
030 Pharmacology
LA English
SL English
ED Entered STN: 1 Sep 2006
Last Updated on STN: 1 Sep 2006

L4 ANSWER 2 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Techniques: Cardiovascular pharmacology and drug discovery in the 21st century.
AB The latter half of the 20th century has been characterized by pharmacologists as the 'age of the receptor', an era in which the bioassay, that stalwart of classical pharmacology, has played a seminal role in identifying novel cardiovascular medicines. In this article, we ask what, if anything, has changed in the pharmacologist's approach to discovering novel cardiovascular drugs on this, the 25th anniversary of the inaugural publication of Trends in Pharmacological Sciences.
AN 2004180717 EMBASE <<LOGINID::20070405>>
TI Techniques: Cardiovascular pharmacology and drug discovery in the 21st century.
AU Douglas S.A.; Ohlstein E.H.; Johns D.G.
CS S.A. Douglas, Vascular Thrombosis and Inflammation, Cardiovasc. Urogenital Ctr. E., GlaxoSmithKline, King of Prussia, PA 19406-0939, United States. steve_a_douglas@gsk.com
SO Trends in Pharmacological Sciences, (2004) Vol. 25, No. 4, pp. 225-233. .
Refs: 88
ISSN: 0165-6147 CODEN: TPHSDY
PUI S 0165-6147(04)00064-1
CY United Kingdom
DT Journal; General Review
FS 018 Cardiovascular Diseases and Cardiovascular Surgery
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
SL English
ED Entered STN: 6 May 2004
Last Updated on STN: 6 May 2004

L4 ANSWER 3 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Lysophosphatidic Acid Induces Neointima Formation Through PPARγ Activation.
AB Neointimal lesions are characterized by accumulation of cells within the arterial wall and are a prelude to atherosclerotic disease. Here we report that a brief exposure to either alkyl ether analogs of the growth factor-like phospholipid lysophosphatidic acid (LPA), products generated during the oxidative modification of low density lipoprotein, or to unsaturated acyl forms of LPA induce progressive formation of neointima in vivo in a rat carotid artery model. This effect is completely inhibited by the peroxisome proliferator-activated receptor (PPAR)γ antagonist GW9662 and mimicked by PPARγ agonists Rosiglitazone and 1-O-hexadecyl-2-azeleoyl-phosphatidylcholine. In contrast, stearoyl-oxovaleryl phosphatidylcholine, a PPARα agonist and polypeptide epidermal growth factor, platelet-derived growth factor, and vascular endothelial growth factor failed to elicit neointima. The structure-activity relationship for neointima induction by LPA analogs in vivo is identical to that of PPARγ activation in vitro and disparate from that of LPA G protein-coupled receptor activation. Neointima-inducing LPA analogs up-regulated the CD36 scavenger receptor in vitro and in vivo and elicited dedifferentiation of cultured vascular smooth muscle cells that was prevented by GW9662. These results suggest that selected LPA analogs are important novel endogenous PPARγ ligands capable of mediating vascular remodeling and that activation of the nuclear transcription factor PPARγ is both necessary and sufficient for neointima formation by components of oxidized low density lipoprotein.
AN 2004134420 EMBASE <<LOGINID::20070405>>
TI Lysophosphatidic Acid Induces Neointima

Formation Through PPARγ Activation.
AU Zhang C.; Baker D.L.; Yasuda S.; Makarova N.; Balazs L.; Johnson L.R.; Marathe G.K.; McIntyre T.M.; Xu Y.; Prestwich G.D.; Byun H.-S.; Bittman R.; Tigyi G.
CS G. Tigyi, Univ. of Tennessee Hlth. Sci. Ctr., Dept. of Physiology, 894 Union Ave., Memphis, TN 38163, United States. gtigyi@physio1.utmem.edu
SO Journal of Experimental Medicine, (15 Mar 2004) Vol. 199, No. 6, pp. 763-774. .
Refs: 53
ISSN: 0022-1007 CODEN: JEMEAV
CY United States
DT Journal; Article
FS 005 General Pathology and Pathological Anatomy
018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry
LA English
SL English
ED Entered STN: 22 Apr 2004
Last Updated on STN: 22 Apr 2004

L4 ANSWER 4 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI Potential role of lysophosphatidic acid in hypertension and atherosclerosis.
AB Background: Lysophosphatidic acid (LPA) is present in both serum and cytosol. Serum LPA is mainly released from platelets whereas cycosolic LPA is the metabolite of phosphatidic acid due to the action of phopholipase A(2). Because platelet function and phospholipase A(2) activity are upregulated in hypertensive and coronary heart disease patients, respectively, plasma and cytosolic LPA levels are expected to be higher in these pathological conditions. Observations: LPA is known to cause platelet aggregation and thus release more LPA as well as platelet-derived growth factor; this positive feedback circuit leads to the continuous growth of vascular smooth muscle cells (VSMCs). LPA also increases the intracellular concentration of free calcium in VSMCs and elevates the blood pressure. LPA content in the atherosclerotic plaque is elevated about 13 times in comparison with normal tissues because oxidized low-density lipoproteins promote the production of LPA. On the other hand, LPA has been shown to protect the heart from ischemia and reperfusion-induced damage due to its antiapoptosis effect. Because LPA has been reported to stimulate mitogen-activated protein kinase, phosphatidylinositide-3-kinase and protein kinase C, this bioactive phospholipid may be involved in the signal transduction mechanisms during the process of cardiac hypertrophy. Conclusions: Due to its ability to increase intracellular Ca(2+) and proliferation of VSMCs, LPA may play an important role in the development of hypertension and atherosclerosis. It is therefore suggested that LPA antagonists may prove useful in the treatment of both hypertension and atherosclerosis.
AN 2004050253 EMBASE <<LOGINID::20070405>>
TI Potential role of lysophosphatidic acid in hypertension and atherosclerosis.
AU Xu Y.-J.; Aziz O.A.; Bhugra P.; Arneja A.S.; Mendis M.R.; Dhalla N.S.
CS Dr. N.S. Dhalla, Institute of Cardiovascular Science, St. Boniface Gen. Hosp. Res. Centre, 351 Tache Avenue, Winnipeg, Man. R2H 2A6, Canada. nsdhalla@sbrc.ca
SO Canadian Journal of Cardiology, (2003) Vol. 19, No. 13, pp. 1525-1536. .
Refs: 152
ISSN: 0828-282X CODEN: CJCAEX
CY Canada
DT Journal; General Review
FS 018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry
005 General Pathology and Pathological Anatomy

030 Pharmacology
037 Drug Literature Index
LA English
SL English; French
ED Entered STN: 12 Feb 2004
Last Updated on STN: 12 Feb 2004

L4 ANSWER 6 OF 9 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
TI The significance of platelet-derived growth factors for proliferation of vascular smooth muscle cells.
AB Platelets are important in acute thrombotic occlusion of injured vessels, e.g., subsequent to angioplasty. In contrast to these acute events of thrombus formation, much less is known about the significance of platelets for the control of smooth muscle cell (SMC) proliferation. A body of experimental and clinical evidence indicates an involvement of platelets in the pathology of atherosclerosis and restenosis. However, the precise role of platelet-derived growth factors for SMC proliferation in atherosclerotic and restenotic vessels is not clear and many questions remain unresolved. Platelet-dependent SMC mitogenesis is determined by a coordinate action of several classes of mitogenic factors which are either released from storage pools or generated upon platelet activation. Although platelet-derived growth factor (PDGF) is considered to be the most important platelet mitogen it is very likely that yet unknown factors and mechanisms are involved. Differential (stimulatory or inhibitory) effects on SMC growth and differentiation have been reported for different platelet-derived growth factors. Thus, for the overall response, complex interactions between multiple factors need to be considered. In addition, multicellular interactions, e.g., between platelets and endothelial cells may modulate the effects of platelet-derived factors on SMC mitogenesis. Taken together, the mechanisms of platelet-dependent SMC proliferation need to be reevaluated. The assessment of the precise role of platelet mitogens in the complex proliferative repair mechanisms of an injured vessel wall clearly requires further studies.
AN 1999138377 EMBASE <<LOGINID::20070405>>
TI The significance of platelet-derived growth factors for proliferation of vascular smooth muscle cells.
AU Weber A.-A.; Schror K.
CS Dr. K. Schror, Institut fur Pharmakologie, Heinrich-Heine-Universitat, Moorenstr. 5, D-40225 Dusseldorf, Germany. schroer@pharma.uni-duesseldorf.de
SO Platelets, (1999) Vol. 10, No. 2-3, pp. 77-96. .
Refs: 275
ISSN: 0953-7104 CODEN: PLTEEF
CY United Kingdom
DT Journal; General Review
FS 002 Physiology
009 Surgery
018 Cardiovascular Diseases and Cardiovascular Surgery
025 Hematology
030 Pharmacology
037 Drug Literature Index
LA English
SL English
ED Entered STN: 29 Apr 1999
Last Updated on STN: 29 Apr 1999

L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Subtype-Selective Antagonists of Lysophosphatidic Acid Receptors Inhibit Platelet Activation Triggered by the Lipid Core of Atherosclerotic Plaques
AB Lysophosphatidic acid (LPA) is a platelet-activating component of mildly oxidized LDL (mox-LDL) and lipids isolated from human atherosclerotic plaques. Specific antagonists of platelet LPA receptors

could be useful inhibitors of thrombus formation in patients with cardiovascular disease. Short-chain analogs of phosphatidic acid (PA) were examined for their effect on two initial platelet responses, platelet shape change and Ca2+ mobilization. Dioctylglycerol pyrophosphate [DGPP(8:0)] and dioctylphosphatidic acid [PA(8:0)], recently described selective antagonists of the LPA1 and LPA3 receptors, inhibited platelet activation evoked by LPA but not by other platelet stimuli. DGPP(8:0) was more potent than PA(8:0). DGPP(8:0) also inhibited platelet shape change induced by mox-LDL and lipid exts. from human atherosclerotic plaques. Notably, we demonstrate for the first time that the lipid-rich core isolated from soft plaques was able to directly induce shape change. This effect was completely abrogated by prior incubation of platelets with DGPP(8:0). Moreover, coapplication of the lipid-rich core or LPA together with subthreshold concns. of ADP or epinephrine synergistically induced platelet aggregation; this effect was inhibited by DGPP(8:0). Anal. by liquid chromatog.-mass spectrometry revealed the presence of LPA alkyl- and acyl-mol. species with high platelet-activating potency (16:0-alkyl-LPA, 20:4-acyl-LPA). LPA mols. present in the core region of atherosclerotic plaques trigger rapid platelet activation through the stimulation of LPA1 and LPA3 receptors. Antagonists of platelet LPA receptors might provide a new strategy to prevent thrombus formation in patients with cardiovascular diseases.

AN 2003:601141 CAPLUS <<LOGINID::20070405>>
DN 140:281040
TI Subtype-Selective Antagonists of Lysophosphatidic Acid Receptors Inhibit Platelet Activation Triggered by the Lipid Core of Atherosclerotic Plaques
AU Rother, Enno; Brandl, Richard; Baker, Daniel L.; Goyal, Pankaj; Gebhard, Harry; Tigyi, Gabor; Siess, Wolfgang
CS Medical Faculty, Institute for Prevention of Cardiovascular Diseases, University of Munich, Munich, Germany
SO Circulation (2003), 108(6), 741-747
CODEN: CIRCAZ; ISSN: 0009-7322
PB Lippincott Williams & Wilkins
DT Journal
LA English
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Activation of human monocytic cells by lysophosphatidic acid and sphingosine-1-phosphate
AB Lysophosphatidic acid (LPA) and sphingosine-1-phosphate (S1P) are serum-borne lipid mediators with potential proinflammatory and atherogenic properties. The authors studied the effects of LPA and S1P on [Ca2+]i, a second messenger of cellular activation, in human monocytic Mono Mac 6 (MM6) cells. LPA and S1P induced [Ca2+]i transients with EC50 values of 47 and 340 nM, resp. Ca2+ signals evoked by LPA and S1P originated mainly from the stimulation of Ca2+ entry, were blocked by the phospholipase C inhibitor U73122, and were inhibited by pertussis toxin. The LPA1 and LPA3 receptor antagonist dioctylglycerol pyrophosphate inhibited the LPA-induced Ca2+ signal. Notably, serum and minimally modified LDL (mm-LDL) evoked [Ca2+]i increases that were mediated entirely via activation of LPA receptors. Reverse transcriptase polymerase chain reaction (RT-PCR) anal. showed the presence of the LPA and S1P receptor subtypes LPA1, LPA2, S1P1, S1P2, S1P4 in MM6 cells, human monocytes, and macrophages. Thus, LPA, mm-LDL, and serum induce via activation of the LPA1 receptor a Gi/phospholipase C/Ca2+ signaling pathway in monocytes. This study is the first report showing the receptor-mediated activation of human monocytes by low nanomolar concns. of LPA and S1P, and suggests a role of these lipid mediators in inflammation and atherogenesis.

AN 2003:164640 CAPLUS <<LOGINID::20070405>>
DN 138:336336

TI Activation of human monocytic cells by lysophosphatidic acid and sphingosine-1-phosphate
AU Fueller, Markus; Wang, De An; Tigyi, Gabor; Siess, Wolfgang
CS Institut fuer Prophylaxe und Epidemiologie der Kreislaufkrankheiten, Klinikum der Universitat Munchen, Munich, 80336, Germany
SO Cellular Signalling (2003), 15(4), 367-375
CODEN: CESIEY; ISSN: 0898-6568
PB Elsevier Science Inc.
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidylcholine stimulates phospholipase D activity in mouse peritoneal macrophages
AB Lysophosphatidylcholine (lysoPC) is a bioactive phospholipid that is involved in atherogenesis and inflammatory processes. However, the present understanding of mechanisms whereby lysophosphatidylcholine exerts its pathophysiol. actions is incomplete. In the present work, the authors show that lysoPC stimulates phospholipase D (PLD) activity in mouse peritoneal macrophages. PLD activation leads to the generation of important second messengers such as phosphatidic acid, lysophosphatidic acid, and diacylglycerol, all of which can regulate cellular responses involved in atherogenesis and inflammation. The activation of PLD by lysoPC was attenuated by down-regulation of protein kinase C activity with prolonged incubation with 100 nM of 4β-phorbol 12-myristate 13-acetate (PMA). Preincubation of the macrophages with the tyrosine kinase inhibitor genistein also decreased the stimulation of PLD by lysoPC, while pretreatment with orthovanadate, which inhibits tyrosine phosphatases, enhanced basal and lysoPC-stimulated PLD activity. The activation of PLD by lysoPC was attenuated by the platelet activating factor (PAF) receptor antagonist WEB-2086, suggesting a role for PAF receptor activation in this process. Furthermore, acetylation of lysoPC substantially increased its potency in activating PLD, suggesting that a cellular metabolite of lysoPC such as 1-acyl 2-acetyl PC might be responsible for at least part of the effect of lysoPC on PLD.
AN 1999:399897 CAPLUS <<LOGINID::20070405>>
DN 131:183281
TI Lysophosphatidylcholine stimulates phospholipase D activity in mouse peritoneal macrophages
AU Gomez-Munoz, Antonio; O'Brien, Lori; Hundal, Rajinder; Steinbrecher, Urs P.
CS Division of Gastroenterology, Department of Medicine, The University of British Columbia, Vancouver, BC, V5Z 4E3, Can.
SO Journal of Lipid Research (1999), 40(6), 988-993
CODEN: JLPRAW; ISSN: 0022-2275
PB Lipid Research, Inc.
DT Journal
LA English
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s tigyi/au
L5 0 TIGYI/AU

=> s tigyi, Gregor/au
L6 0 TIGYI, GREGOR/AU

=> d his

(FILE 'HOME' ENTERED AT 16:10:26 ON 05 APR 2007)

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     INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
     AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
     CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
     DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 16:10:40 ON 05 APR 2007
               SEA (LYSOPHOSPHATIDIC(W)ACID)AND(ATHEROSCLEROSIS OR NEOINTIMA)A
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                7   FILE BIOSIS
               10   FILE CAPLUS
                1   FILE DDFU
                6   FILE DGENE
                1   FILE DRUGU
               10   FILE EMBASE
                3   FILE ESBIOBASE
                1   FILE IFIPAT
                1   FILE LIFESCI
                4   FILE MEDLINE
                5   FILE PROUSDDR
                7   FILE SCISEARCH
                4   FILE TOXCENTER
              310   FILE USPATFULL
               45   FILE USPAT2
                9   FILE WPIDS
                9   FILE WPINDEX
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     FILE 'EMBASE, CAPLUS' ENTERED AT 16:12:09 ON 05 APR 2007
L2           20 S (LYSOPHOSPHATIDIC(W)ACID)AND(ATHEROSCLEROSIS OR NEOINTIMA)AND
L3           16 DUP REM L2 (4 DUPLICATES REMOVED)
L4            9 S L3 NOT PY>2004
L5            0 S TIGYI/AU
L6            0 S TIGYI, GREGOR/AU

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    48.09      50.19

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -2.34      -2.34

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STN INTERNATIONAL SESSION SUSPENDED AT 16:14:36 ON 05 APR 2007

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PASSWORD:
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FULL ESTIMATED COST                                     48.09      50.19

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                                                        ENTRY    SESSION
CA SUBSCRIBER PRICE                                     -2.34      -2.34

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COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                     48.09      50.19

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE      TOTAL
                                                        ENTRY    SESSION
CA SUBSCRIBER PRICE                                     -2.34      -2.34

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FILE LAST UPDATED: 4 Apr 2007  (20070404/ED)

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=> s lysophosphatidic(w)acid
          3125 LYSOPHOSPHATIDIC
       4347140 ACID
L7        2449 LYSOPHOSPHATIDIC(W)ACID

=> s l7 and (atherosclerosis or neointima or cardiovascular)
         53756 ATHEROSCLEROSIS
          1784 NEOINTIMA
         96467 CARDIOVASCULAR
L8          98 L7 AND (ATHEROSCLEROSIS OR NEOINTIMA OR CARDIOVASCULAR)

=> s l8 and (antagon? or inhib?)
        295881 ANTAGON?
       1918705 INHIB?
L9          50 L8 AND (ANTAGON? OR INHIB?)

=> s l9 not py>2004
       2930588 PY>2004
L10         27 L9 NOT PY>2004

=> d l10 1-27 ti

L10  ANSWER 1 OF 27  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Oxidized lipoprotein regulation of tissue factor in smooth muscle cells
```

L10 ANSWER 2 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipid receptors

L10 ANSWER 3 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Thrombogenic and atherogenic activities of lysophosphatidic acid

L10 ANSWER 4 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Induction of connective tissue growth factor (CTGF) in human endothelial cells by lysophosphatidic acid, sphingosine-1-phosphate, and platelets

L10 ANSWER 5 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Effects of adrenomedullin on cell proliferation in rat adventitia induced by lysophosphatidic acid

L10 ANSWER 6 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipid G Protein-coupled Receptors

L10 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI The plaque lipid lysophosphatidic acid stimulates platelet activation and platelet-monocyte aggregate formation in whole blood: involvement of P2Y1 and P2Y12 receptors

L10 ANSWER 8 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic acid induces neointima formation through PPARγ activation

L10 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Potential role of lysophosphatidic acid in hypertension and atherosclerosis

L10 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Statins upregulate CD36 expression in human monocytes, an effect strengthened when combined with PPAR-γ ligands Putative contribution of Rho GTPases in statin-induced CD36 expression

L10 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Genes expressed in atherosclerotic tissue and their use in diagnosis and pharmacogenetics

L10 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lipid Phosphate Phosphatases Regulate Lysophosphatidic Acid Production and Signaling in Platelets: studies using chemical inhibitors of lipid phosphate phosphatase activity

L10 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Modulators of lysophosphatidic acid signalling

L10 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Subtype-Selective Antagonists of Lysophosphatidic Acid Receptors Inhibit Platelet Activation Triggered by the Lipid Core of Atherosclerotic Plaques

L10 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Activation of human monocytic cells by lysophosphatidic acid and sphingosine-1-phosphate

L10 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic Acid Induction of Tissue Factor Expression in Aortic Smooth Muscle Cells

L10 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN

TI Mechanism of the positive inotropic effect of lysophosphatidic acid in rat heart

L10 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipids and the cardiovascular system

L10 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Diagnosis and therapy of diseases associated with angiogenesis by detection of single nucleotide polymorphism and cytosine methylation in chemically modified genomic DNA

L10 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipid growth factors and their G protein-coupled receptors in immunity, coronary artery disease, and cancer

L10 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Mildly oxidized low density lipoprotein rapidly stimulates via activation of the lysophosphatidic acid receptor Src family and Syk tyrosine kinases and Ca2+ influx in human platelets

L10 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Stimulation of platelets and endothelial cells by mildly oxidized LDL proceeds through activation of lysophosphatidic acid receptors and the rho/rho-kinase pathway. Inhibition by lovastatin

L10 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic acid mediates the rapid activation of platelets and endothelial cells by mildly oxidized low density lipoprotein and accumulates in human atherosclerotic lesions

L10 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidylcholine stimulates phospholipase D activity in mouse peritoneal macrophages

L10 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic acid stimulates protein kinase C isoforms α, β, ε, and ζ in a pertussis toxin sensitive pathway in vascular smooth muscle cells

L10 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Structural differences in the ability of lysophospholipids to inhibit endothelium-dependent hyperpolarization by acetylcholine in rat mesenteric arteries

L10 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Oxidized low density lipoprotein-mediated activation of phospholipase D in smooth muscle cells: a possible role in cell proliferation and atherogenesis

=> s l10 not l4
L11 24 L10 NOT L4

=> d l10 1-24 ti

L10 ANSWER 1 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Oxidized lipoprotein regulation of tissue factor in smooth muscle cells

L10 ANSWER 2 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipid receptors

L10 ANSWER 3 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Thrombogenic and atherogenic activities of lysophosphatidic

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L10 ANSWER 4 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Induction of connective tissue growth factor (CTGF) in human endothelial cells by lysophosphatidic acid, sphingosine-1-phosphate, and platelets

L10 ANSWER 5 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
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TI Lysophospholipid G Protein-coupled Receptors

L10 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
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L10 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
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TI Modulators of lysophosphatidic acid signalling

L10 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Subtype-Selective Antagonists of Lysophosphatidic Acid Receptors Inhibit Platelet Activation Triggered by the Lipid Core of Atherosclerotic Plaques

L10 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
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L10 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Mechanism of the positive inotropic effect of lysophosphatidic acid in rat heart

L10 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipids and the cardiovascular system

L10 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Diagnosis and therapy of diseases associated with angiogenesis by detection of single nucleotide polymorphism and cytosine methylation in chemically modified genomic DNA

L10 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
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L10 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Mildly oxidized low density lipoprotein rapidly stimulates via activation of the lysophosphatidic acid receptor Src family and Syk tyrosine kinases and Ca2+ influx in human platelets

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TI Stimulation of platelets and endothelial cells by mildly oxidized LDL proceeds through activation of lysophosphatidic acid receptors and the rho/rho-kinase pathway. Inhibition by lovastatin

L10 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic acid mediates the rapid activation of platelets and endothelial cells by mildly oxidized low density lipoprotein and accumulates in human atherosclerotic lesions

L10 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidylcholine stimulates phospholipase D activity in mouse peritoneal macrophages

=> d l10 2 4 5 8 9 13 15 18 20 22 23 ti abs bib

L10 ANSWER 2 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipid receptors
AB A review. The lysophospholipids (LPLs) include lysophosphatidic acid (radyl-lyso-glycerophosphate), 2,3-cyclic phosphatidic acid, 1-alkyl-2-acetyl-glycero-3-phosphate, sphingosine 1-phosphate, dihydro-sphingosine-1-phosphate, sphingosylphosphorylcholine (lysosphingomyelin), and lysophosphatidylcholine. LPLs exert many of their biol. effects through specific plasma membrane and/or intracellular receptors. LPLs are abundantly present in biol. fluids and many of them are generated through stimulus-coupled activation of biochem. pathways. With only very few exceptions (e.g. RH7777 hepatoma, Sf9 insect, and Saccharomyces cerevisiae cells), most cells are responsive to one or more LPLs, indicating a widespread expression of their receptors. LPLs promote cell survival, exert mitogenic/antimitogenic regulation of the cell cycle, affect cell shape and enhance/inhibit cell motility, regulate organotypic differentiation, modulate immunol. responses, and regulate Ca2+ homeostasis. In a pathol. context, LPLs have been shown to play a role in tumor cell invasion, angiogenesis, neointima formation, development of the heart ventricles, chemotherapeutic and radiation resistance, facial dysmorphism, nociception, and suckling behavior. The current understanding of lysophospholipid biol. is very limited and the present understanding of their role in disease is rudimentary.
AN 2005:103923 CAPLUS <<LOGINID::20070405>>
DN 143:21510
TI Lysophospholipid receptors
AU Tigyi, Gabor J.
CS University of Tennessee Health Sciences Center, Memphis, TN, USA
SO Encyclopedia of Biological Chemistry (2004), Volume 2, 602-604. Editor(s): Lennarz, William J.; Lane, M. Daniel. Publisher: Elsevier Ltd., Oxford, UK.
CODEN: 69GLBX; ISBN: 0-12-443710-9
DT Conference; General Review

LA English
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Induction of connective tissue growth factor (CTGF) in human endothelial cells by lysophosphatidic acid, sphingosine-1-phosphate, and platelets
AB Endothelial dysfunction is characterized by multiple interactions between endothelial cells and components of the blood. This study focussed on the induction of the pro-atherogenic connective tissue growth factor (CTGF) in endothelial cells by bioactive lipids and platelets. Lysophosphatidic acid (LPA) and sphingosine-1-phosphate (S1P) led to a time- and concentration-dependent increase in CTGF mRNA and protein expression in the human endothelial cell line EAHY 926 and in primary cultures of human umbilical vein endothelial cells (HUVEC). As both cell types expressed various receptors for LPA and S1P, signaling pathways were further characterized by pharmacol. means: induction of CTGF was pertussis toxin-insensitive and inhibition of activation of p42/44 MAP kinases only partially reduced CTGF expression. On the contrary, interference with the RhoA signaling pathway by simvastatin, an inhibitor of geranylgeranyltransferases, or the Rho-kinase inhibitor Y27632 prevented induction of CTGF. Co-incubation of endothelial cells with freshly isolated human platelets significantly increased the expression of CTGF mRNA in endothelial cells, which was also sensitive to simvastatin. Up-regulation of CTGF in endothelial cells, induced by LPA, S1P, or platelets, may contribute to the initiation and progression of atherosclerosis. Interference of simvastatin with the synthesis of this pro-atherogenic factor further supports the anti-atherogenic role of statins.
AN 2004:579364 CAPLUS <<LOGINID::20070405>>
DN 141:155011
TI Induction of connective tissue growth factor (CTGF) in human endothelial cells by lysophosphatidic acid, sphingosine-1-phosphate, and platelets
AU Muehlich, Susanne; Schneider, Nadine; Hinkmann, Fabian; Garlichs, Christoph D.; Goppelt-Struebe, Margarete
CS Medizinische Klinik IV, Universitat Eriangen-Nurnberg, Erlangen, 91054, Germany
SO Atherosclerosis (Amsterdam, Netherlands) (2004), 175(2), 261-268
CODEN: ATHSBL; ISSN: 0021-9150
PB Elsevier
DT Journal
LA English
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Effects of adrenomedullin on cell proliferation in rat adventitia induced by lysophosphatidic acid
AB Lysophosphatidic acid (LPA) is a bioactive phospholipid having growth factor-like activity on fibroblasts and is involved in cardiovascular diseases such as hypertension and heart failure by inducing vascular remodeling, characterized by fibroblast proliferation and migration in adventitia. Among various bioactive factors that LPA works with, adrenomedullin (ADM) is a multiple functional peptide with an important cytoprotective effect against cardiovascular damage. We studied rat aortic adventitia to explore the possible paracrine/autocrine interaction between endogenous ADM and LPA. LPA stimulation of the adventitia to secrete ADM and express its mRNA was concentration dependent. ADM inhibited LPA-induced proliferation in adventitial cells and attenuated the activity of mitogen-activated protein kinase (MAPK) stimulated by LPA. In contrast, treatment with specific antagonists of the ADM receptor

potentiated the LPA-induced proliferation in adventitial cells. We concluded that LPA stimulates the adventitia to produce and secrete ADM, which in turn regulates the vascular biol. effects of LPA.

AN 2004:579012 CAPLUS <<LOGINID::20070405>>
DN 141:117719
TI Effects of adrenomedullin on cell proliferation in rat adventitia induced by lysophosphatidic acid
AU Yang, Jing-Hui; Jiang, Wei; Pan, Chun-Shui; Qi, Yong-Feng; Wu, Qi-Zhuan; Pang, Yong-Zheng; Tang, Chao-Shu
CS Institute of Cardiovascular Disease, Peking University First Hospital, Beijing, 100034, Peop. Rep. China
SO Regulatory Peptides (2004), 121(1-3), 49-56
CODEN: REPPDY; ISSN: 0167-0115
PB Elsevier Science B.V.
DT Journal
LA English
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic acid induces neointima formation through PPARγ activation
AB Neointimal lesions are characterized by accumulation of cells within the arterial wall and are a prelude to atherosclerotic disease. Here the authors report that a brief exposure to either alkyl ether analogs of the growth factor-like phospholipid lysophosphatidic acid (LPA), products generated during the oxidative modification of low d. lipoprotein, or to unsatd. acyl forms of LPA induce progressive formation of neointima in vivo in a rat carotid artery model. This effect is completely inhibited by the peroxisome proliferator-activated receptor (PPAR)γ antagonist GW9662 and mimicked by PPARγ agonists Rosiglitazone and 1-O-hexadecyl-2-azeleoylphosphatidylcholine. In contrast, stearoyloxovalerylphosphatidylcholine, a PPARα agonist and the polypeptides epidermal growth factor, platelet-derived growth factor, and vascular endothelial growth factor failed to elicit neointima. The structure-activity relation for neointima induction by LPA analogs in vivo is identical to that of PPARγ activation in vitro and disparate from that of LPA G protein-coupled receptor activation. Neointima -inducing LPA analogs up-regulated the CD36 scavenger receptor in vitro and in vivo and elicited dedifferentiation of cultured vascular smooth muscle cells that was prevented by GW9662. These results suggest that selected LPA analogs are important novel endogenous PPARγ ligands capable of mediating vascular remodeling and that activation of the nuclear transcription factor PPARγ is both necessary and sufficient for neointima formation by components of oxidized low d. lipoprotein.

AN 2004:242383 CAPLUS <<LOGINID::20070405>>
DN 140:373126
TI Lysophosphatidic acid induces neointima formation through PPARγ activation
AU Zhang, Chunxiang; Baker, Daniel L.; Yasuda, Satoshi; Makarova, Natalia; Balazs, Louisa; Johnson, Leonard R.; Marathe, Gopal K.; McIntyre, Thomas M.; Xu, Yong; Prestwich, Glenn D.; Byun, Hoe-Sup; Bittman, Robert; Tigyi, Gabor
CS Vascular Biology Center of Excellence, The University of Tennessee Health Science Center, Memphis, TN, 38163, USA
SO Journal of Experimental Medicine (2004), 199(6), 763-774
CODEN: JEMEAV; ISSN: 0022-1007
PB Rockefeller University Press
DT Journal
LA English
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Potential role of lysophosphatidic acid in hypertension and atherosclerosis
AB A review. Lysophosphatidic acid (LPA) is present in both serum and cytosol. Serum LPA is mainly released from platelets whereas cytosolic LPA is the metabolite of phosphatidic acid due to the action of phospholipase A2. Because platelet function and phospholipase A2 activity are upregulated in hypertensive and coronary heart disease patients, resp., plasma and cytosolic LPA levels are expected to be higher in these pathol. conditions. LPA is known to cause platelet aggregation and thus release more LPA as well as platelet-derived growth factor; this pos. feedback circuit leads to the continuous growth of vascular smooth muscle cells (VSMCs). LPA also increases the intracellular concentration of free calcium in VSMCs and elevates the blood pressure. LPA content in the atherosclerotic plaque is elevated about 13 times in comparison with normal tissues because oxidized low-d. lipoproteins promote the production of LPA. On the other hand, LPA has been shown to protect the heart from ischemia and reperfusion-induced damage due to its antiapoptosis effect. Because LPA has been reported to stimulate mitogen-activated protein kinase, phosphatidylinositide-3-kinase and protein kinase C, this bioactive phospholipid may be involved in the signal transduction mechanisms during the process of cardiac hypertrophy. Due to its ability to increase intracellular Ca2+ and proliferation of VSMCs, LPA may play an important role in the development of hypertension and atherosclerosis. It is therefore suggested that LPA antagonists may prove useful in the treatment of both hypertension and atherosclerosis.
AN 2004:47370 CAPLUS <<LOGINID::20070405>>
DN 140:197045
TI Potential role of lysophosphatidic acid in hypertension and atherosclerosis
AU Xu, Yan-Jun; Aziz, Osama A.; Bhugra, Praveen; Arneja, Amarjit S.; Mendis, Maleen R.; Dhalla, Naranjan S.
CS Institute of Cardiovascular Sciences, St. Boniface General Hospital Research Centre, and Departments of Physiology and Medicine, University of Manitoba, Winnipeg, MB, Can.
SO Canadian Journal of Cardiology (2003), 19(13), 1525-1536
CODEN: CJCAEX; ISSN: 0828-282X
PB Pulsus Group
DT Journal; General Review
LA English
RE.CNT 152 THERE ARE 152 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Modulators of lysophosphatidic acid signalling
AB A review. Lysophosphatidic acid (LPA) is a key lipid mediator in the regulation of cell proliferation, cell survival, motility, invasion, and wound healing in normal cells, such as fibroblasts and hematopoietic cells. In addition, LPA signaling is implicated in cancer, atherosclerosis, ischemia perfusion injury, and other pathophysiol. conditions. LPA, sphingolipids, and other lysophospholipids act through several mechanisms: (i) a family of cell-surface 7 transmembrane domain G-protein-coupled receptors; (ii) a nuclear hormone-activated transcription factor; (iii) membrane curvature and endocytosis, and (iv) other targets yet to be defined. Based on the action of LPA on mol. targets in different human pathologies, both receptor-selective agonists and antagonists are sought as potential clin. agents. In addition, the control of endogenous production and clearance of LPA may provide an important target for treatment of multiple disease states. Thus, modifiers of phospholipase A1 and A2, lysophospholipase D, LPA acyl transferase, and lipid phosphate phosphatase

activities should be explored as potential therapeutics. This overview summarizes the literature and issued patents covering the mol. agents developed to potentially manipulate the specific effects of LPA on cell physiol. and clin. outcome.

AN 2003:792572 CAPLUS <<LOGINID::20070405>>
DN 140:174199
TI Modulators of lysophosphatidic acid signalling
AU Li, Feng; Mills, Gordon B.; Prestwich, Glenn D.
CS Echelon Biosciences, Inc., Salt Lake City, UT, 84108, USA
SO Expert Opinion on Therapeutic Patents (2003), 13(10), 1619-1634
CODEN: EOTPEG; ISSN: 1354-3776
PB Ashley Publications Ltd.
DT Journal; General Review
LA English
RE.CNT 140 THERE ARE 140 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Activation of human monocytic cells by lysophosphatidic acid and sphingosine-1-phosphate
AB Lysophosphatidic acid (LPA) and sphingosine-1-phosphate (S1P) are serum-borne lipid mediators with potential proinflammatory and atherogenic properties. The authors studied the effects of LPA and S1P on [Ca2+]i, a second messenger of cellular activation, in human monocytic Mono Mac 6 (MM6) cells. LPA and S1P induced [Ca2+]i transients with EC50 values of 47 and 340 nM, resp. Ca2+ signals evoked by LPA and S1P originated mainly from the stimulation of Ca2+ entry, were blocked by the phospholipase C inhibitor U73122, and were inhibited by pertussis toxin. The LPA1 and LPA3 receptor antagonist dioctylglycerol pyrophosphate inhibited the LPA-induced Ca2+ signal. Notably, serum and minimally modified LDL (mm-LDL) evoked [Ca2+]i increases that were mediated entirely via activation of LPA receptors. Reverse transcriptase polymerase chain reaction (RT-PCR) anal. showed the presence of the LPA and S1P receptor subtypes LPA1, LPA2, S1P1, S1P2, S1P4 in MM6 cells, human monocytes, and macrophages. Thus, LPA, mm-LDL, and serum induce via activation of the LPA1 receptor a Gi/phospholipase C/Ca2+ signaling pathway in monocytes. This study is the first report showing the receptor-mediated activation of human monocytes by low nanomolar concns. of LPA and S1P, and suggests a role of these lipid mediators in inflammation and atherogenesis.
AN 2003:164640 CAPLUS <<LOGINID::20070405>>
DN 138:336336
TI Activation of human monocytic cells by lysophosphatidic acid and sphingosine-1-phosphate
AU Fueller, Markus; Wang, De An; Tigyi, Gabor; Siess, Wolfgang
CS Institut fuer Prophylaxe und Epidemiologie der Kreislaufkrankheiten, Klinikum der Universitat Munchen, Munich, 80336, Germany
SO Cellular Signalling (2003), 15(4), 367-375
CODEN: CESIEY; ISSN: 0898-6568
PB Elsevier Science Inc.
DT Journal
LA English
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipids and the cardiovascular system
AB A review. The lysophospholipids sphingosine-1-phosphate (S1P) and lysophosphatidic acid (LPA) have varied effects on the cardiovascular system. S1P is necessary for normal vascular development and may play an important role in angiogenesis. These mols. may exert potentially detrimental effects. Both S1P and LPA are released from activated platelets and can in turn stimulate platelet aggregation.

These thrombogenic effects would further enhance ischemia in acute coronary syndromes and myocardial infarction. LPA is a major component of the lipid core of human atherosclerotic plaques and can stimulate vascular smooth muscle proliferation. Both LPA and S1P cause cardiac myocyte hypertrophy in vitro. Beneficial effects include cardioprotection both in vitro and during ischemia/reperfusion in an ex vivo whole heart mouse model. Understanding both the acute and the chronic physiol. and pathophysiol. roles of the lysophospholipids and their cognate receptors and signaling pathways in the cardiovascular system, which are likely to be species-, tissue-, and cell-specific, may allow the development of mols. that can be targeted to stimulate or inhibit a specific function.

AN 2002:459265 CAPLUS <<LOGINID::20070405>>
DN 137:199093
TI Lysophospholipids and the cardiovascular system
AU Karliner, Joel S.
CS VA Medical Center (111C), University of California, San Francisco, CA, 94121, USA
SO Biochimica et Biophysica Acta, Molecular and Cell Biology of Lipids (2002), 1582(1-3), 216-221
CODEN: BBMLFG; ISSN: 1388-1981
PB Elsevier B.V.
DT Journal; General Review
LA English
RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophospholipid growth factors and their G protein-coupled receptors in immunity, coronary artery disease, and cancer
AB A review. The physiol. lysophospholipids (LPLs), exemplified by lysophosphatidic acid (LPA) and sphingosine 1-phosphate (S1P), are omnific mediators of normal cellular proliferation, survival, and functions. Although both LPA and S1P attain micromolar concns. in many biol. fluids, numerous aspects of their biosynthesis, transport, and metabolic degradation are unknown. Eight members of a new subfamily of G protein-coupled LPA/S1P receptors, originally termed Edg Rs, bind either LPA or S1P with high affinity and transduce a series of growth-related and/or cytoskeleton-based functional responses. The most critical areas of LPL biol. and pathobiol. are neural development and neurodegeneration, immunity, atherosclerosis and myocardial injury, and cancer. Data from analyzes of T cells established two basic points: (1) the plasticity and adaptability of expression of LPA/S1P Rs by some cells as a function of activation, and (2) the role of opposing signals from two different receptors for the same ligand as a mechanism for fine control of effects of LPLs. In the heart, LPLs may promote coronary atherosclerosis, but are effectively cytoprotective for hypoxic cardiac myocytes and those exposed to oxygen free radicals. The findings of production of LPA by some types of tumor cells, overexpression of selected sets of LPA receptors by the same tumor cells, and augmentation of the effects of protein growth factors by LPA have suggested pathogenetic roles for the LPLs in cancer. The breadth of physiol. and pathol. activities of LPLs emphasizes the importance of developing bioavailable nonlipid agonists and antagonists of the LPA/S1P receptors for diverse therapeutic applications.

AN 2002:184585 CAPLUS <<LOGINID::20070405>>
DN 137:138098
TI Lysophospholipid growth factors and their G protein-coupled receptors in immunity, coronary artery disease, and cancer
AU Goetzl, Edward J.; Graeler, Markus; Huang, Mei-Chuan; Shankar, Geetha
CS Departments of Medicine and Microbiology, University of California, San Francisco, CA, 94143-0711, USA
SO TheScientificWorld [online computer file] (2002), 2, 324-338
CODEN: THESAS; ISSN: 1532-2246

URL: http://216.25.253.202/TSWJaudit/pdf/2002.03.124.pdf
PB TheScientificWorld, Inc.
DT Journal; General Review; (online computer file)
LA English
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Stimulation of platelets and endothelial cells by mildly oxidized LDL proceeds through activation of lysophosphatidic acid receptors and the rho/rho-kinase pathway. Inhibition by lovastatin
AB A review with 7 refs. is given on recent results concerning the identification of the components in mildly oxidized LDL (mox-LDL) that induce platelet and endothelial cell activation. Mox-LDL stimulates platelets through activation of the lysophosphatidic acid (LPA) receptor. Mild or min. oxidation of LDL produces biol. active LPA pointing at a new, nonenzymic pathway for the formation of LPA. Mox-LDL induces platelet chape change via Rho/Rho-kinase activation. In endothelial cells, mox-LDL induces myosin light chain (MLC) phosphorylation and actin rearrangements. Pretreatment of endothelial cells with lovastatin completely abolished the effects of LPA and mox-LDL on cell morphol. and MLC phosphorylation.
AN 2000:354330 CAPLUS <<LOGINID::20070405>>
DN 132:342669
TI Stimulation of platelets and endothelial cells by mildly oxidized LDL proceeds through activation of lysophosphatidic acid receptors and the rho/rho-kinase pathway. Inhibition by lovastatin
AU Essler, Markus; Retzer, Michaela; Bauer, Markus; Zangl, Konrad J.; Tigyi, Gabor; Siess, Wolfgang
CS Institut fur Prophylaxe und Epidemiologie der Kreislaufkrankheiten, Universitat Munchen, Munchen, D80336, Germany
SO Annals of the New York Academy of Sciences (2000), 905(Lysophospholipids and Eicosanoids in Biology and Pathophysiology), 282-286
CODEN: ANYAA9; ISSN: 0077-8923
PB New York Academy of Sciences
DT Journal; General Review
LA English
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2007 ACS on STN
TI Lysophosphatidic acid mediates the rapid activation of platelets and endothelial cells by mildly oxidized low density lipoprotein and accumulates in human atherosclerotic lesions
AB Oxidized low d. lipoprotein (LDL) is a key factor in the pathogenesis of atherosclerosis and its thrombotic complications, such as stroke and myocardial infarction. It activates endothelial cells and platelets through mechanisms that are largely unknown. Here, we show that lysophosphatidic acid (LPA) was formed during mild oxidation of LDL and was the active compound in mildly oxidized LDL and minimally modified LDL, initiating platelet activation and stimulating endothelial cell stress-fiber and gap formation. Antagonists of the LPA receptor prevented platelet and endothelial cell activation by mildly oxidized LDL. We also found that LPA accumulated in and was the primary platelet-activating lipid of atherosclerotic plaques. Notably, the amount of LPA within the human carotid atherosclerotic lesion was highest in the lipid-rich core, the region most thrombogenic and most prone to rupture. Given the potent biol. activity of LPA on platelets and on cells of the vessel wall, our study identifies LPA as an atherothrombogenic mol. and suggests a possible strategy to prevent and treat atherosclerosis and cardiocerebrovascular diseases.
AN 1999:461753 CAPLUS <<LOGINID::20070405>>

DN 131:212467
TI Lysophosphatidic acid mediates the rapid activation of platelets and endothelial cells by mildly oxidized low density lipoprotein and accumulates in human atherosclerotic lesions
AU Siess, Wolfgang; Zangl, Konrad J.; Essler, Markus; Bauer, Markus; Bauer, Markus; Brandl, Richard; Corrinth, Carolin; Bittman, Robert; Tigyi, Gabor; Aepfelbacher, Martin
CS Institut fur Prophylaxe und Epidemiologie der Kreislaufkrankheiten, Klinikum Innenstadt, Universitat Munchen, Munchen, D 80336, Germany
SO Proceedings of the National Academy of Sciences of the United States of America (1999), 96(12), 6931-6936
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT